

# FAA Air Traffic Organization



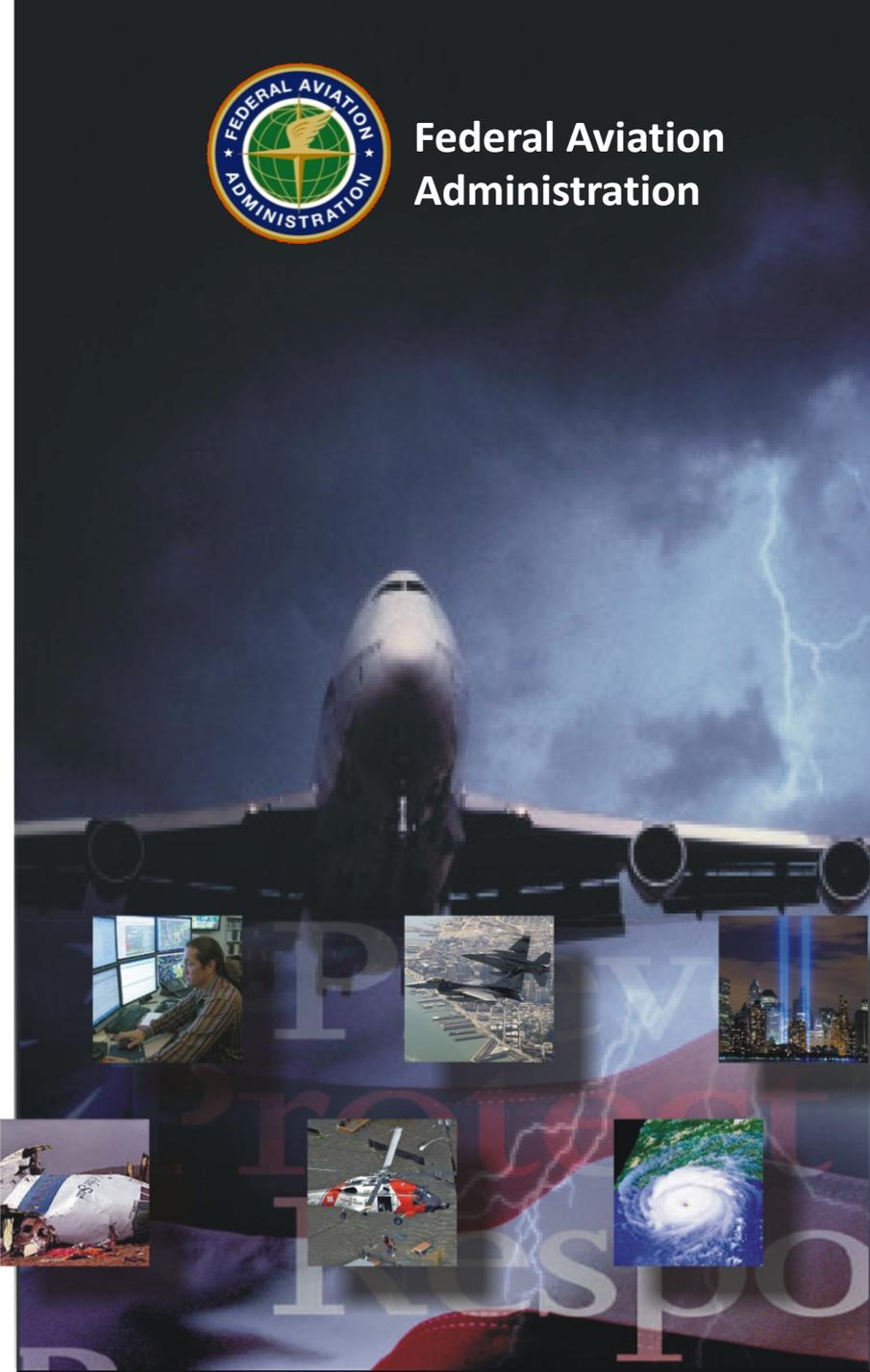
Federal Aviation  
Administration

## UAS Disaster Response

presented to  
**NASA'S STEReO Workshop**

by  
**Kerry Fleming**

date  
**February 13, 2020**



# When Disasters Strike

- **First responders and critical infrastructure partners need immediate access to the airspace.**
- **UAS operators should first attempt to gain access via LAANC if no TFR is present.**
- **If there is a TFR or if LAANC is unavailable then the SOSC must be contacted.**

## Naples FL (APF) Grid Area Depiction from

<https://faa.maps.arcgis.com/apps/webappviewer/index.html?id=9c2e4406710048e19806ebf6a06754ad>



Low Altitude Authorization and Notification Capability (LANNC)

[https://www.faa.gov/uas/programs\\_partnerships/data\\_exchange/](https://www.faa.gov/uas/programs_partnerships/data_exchange/)

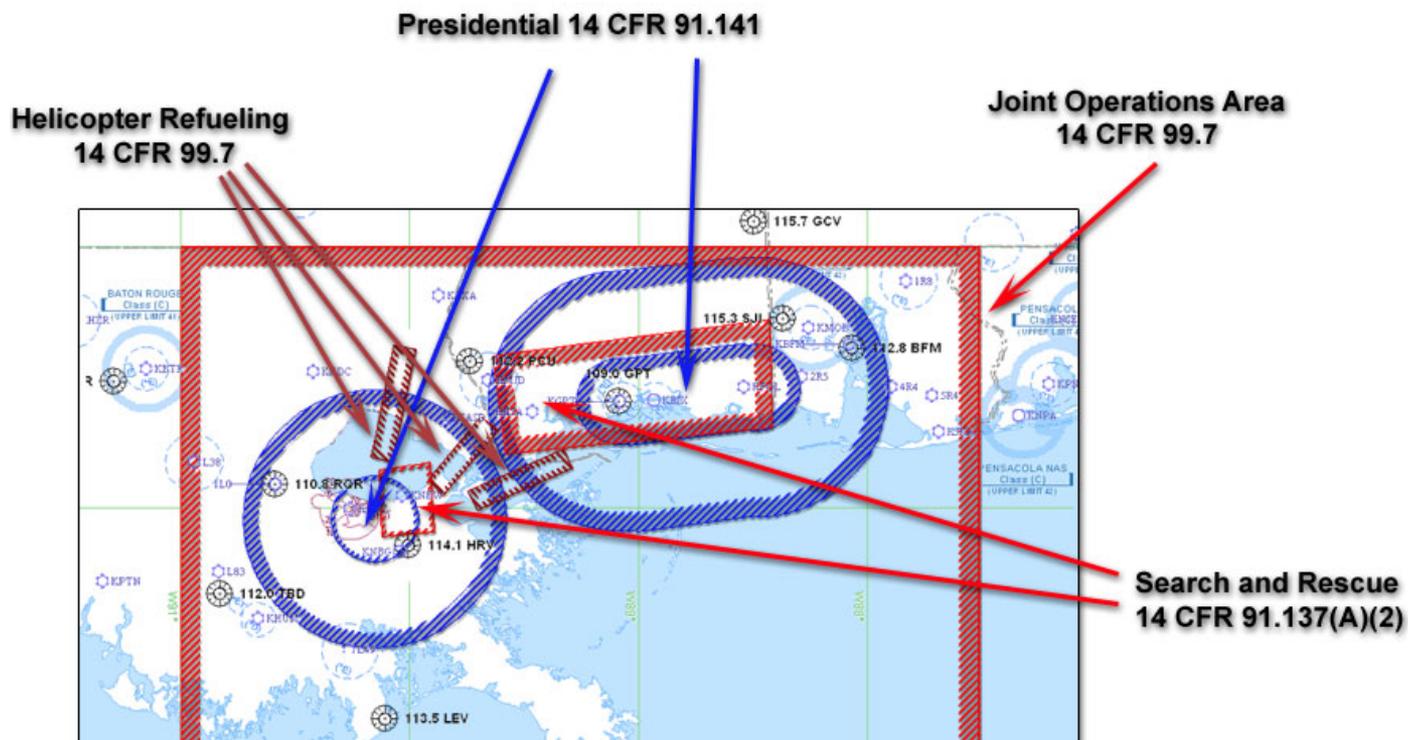
<https://faadronezone.faa.gov>

Several Federal Contract towers (FCT) are coming onboard 2019

# Airspace Contingency Measures

- In coordination with FEMA, State authorities, etc., the FAA regularly uses disaster TFRs as key tools to enable contingency air missions.

Figure 15. Hurricane Katrina TFRs



# Response Aviation Operations

- The FAA regularly works with DOD, the Federal Emergency Management Agency (FEMA), and other partners to enable response air missions - e.g., Search and Rescue (SAR) flights.

Figure 14. Depiction of FAA Emergency Operations Focus



access vetting  
flow management  
operator harmonization

procedural deconfliction  
frequency assignment  
airfield ground ops coordination

# Tornado



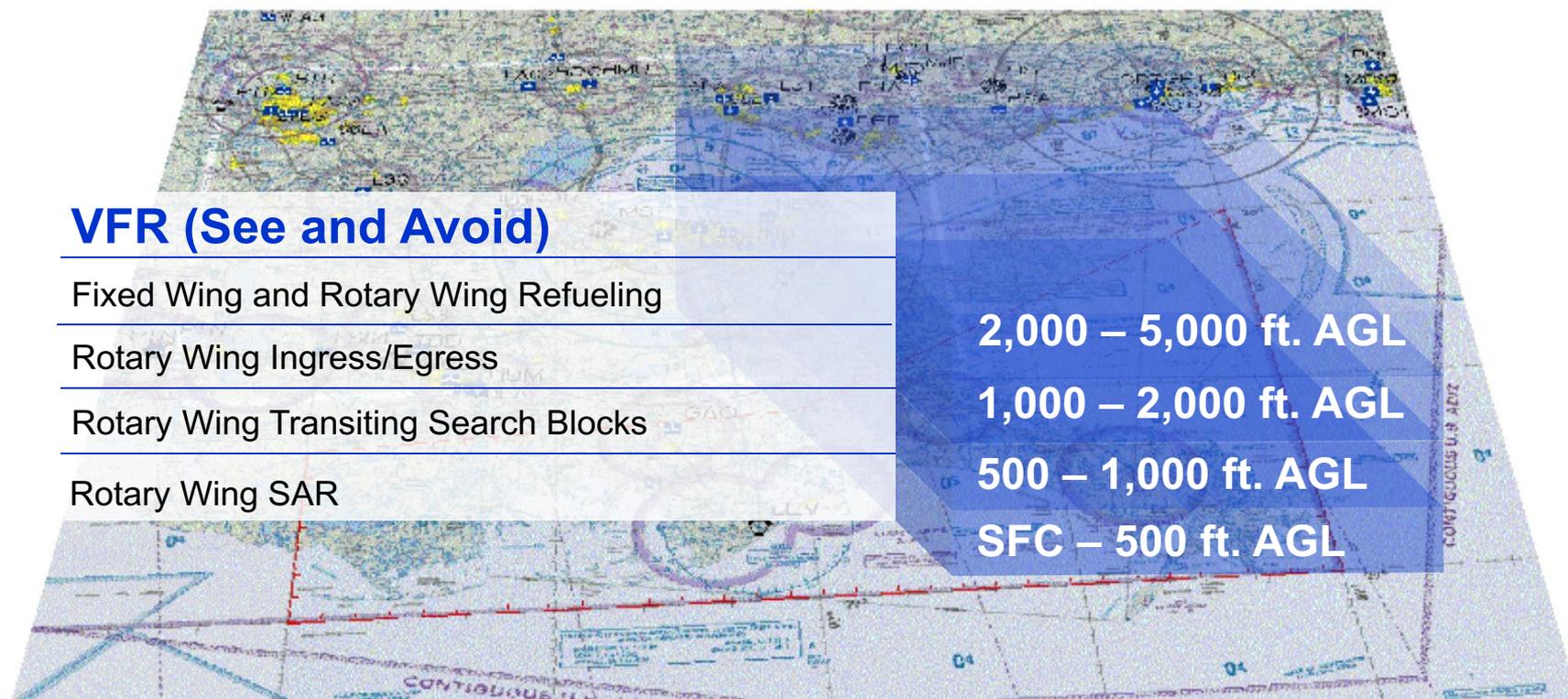
# Hurricane Harvey – Houston, TX August 2017



# Altitude Segregation

- FAA disaster TFRs may utilize procedures based deconfliction, including altitude segregation by mission type, operations grids, etc.

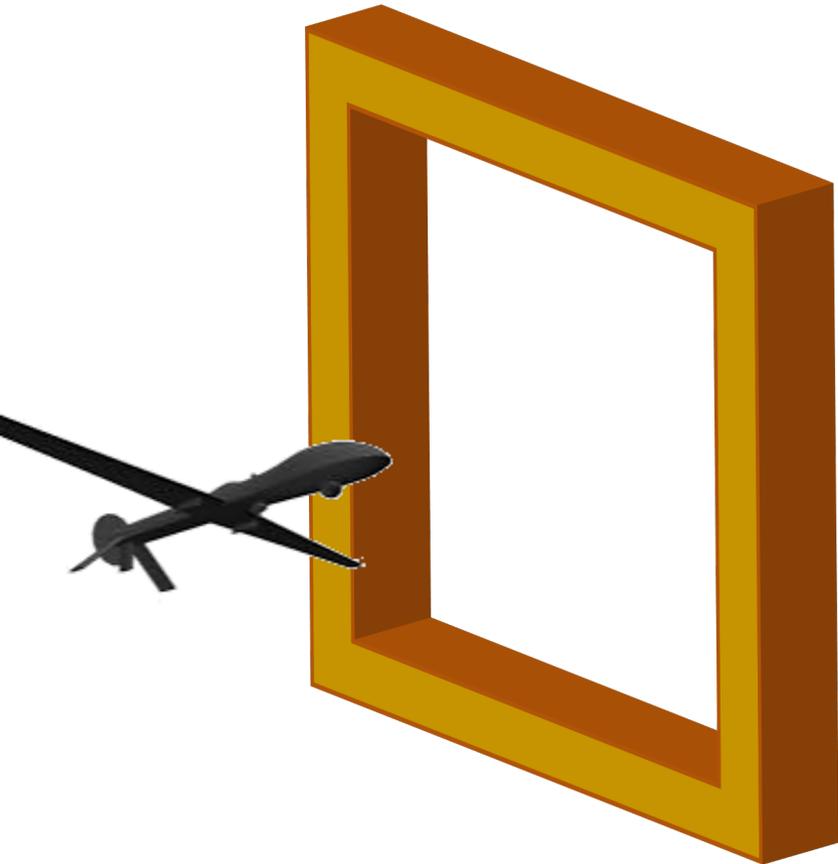
Figure 16. Procedural Deconfliction Through Altitude Segregation by Mission Type Within a TFR



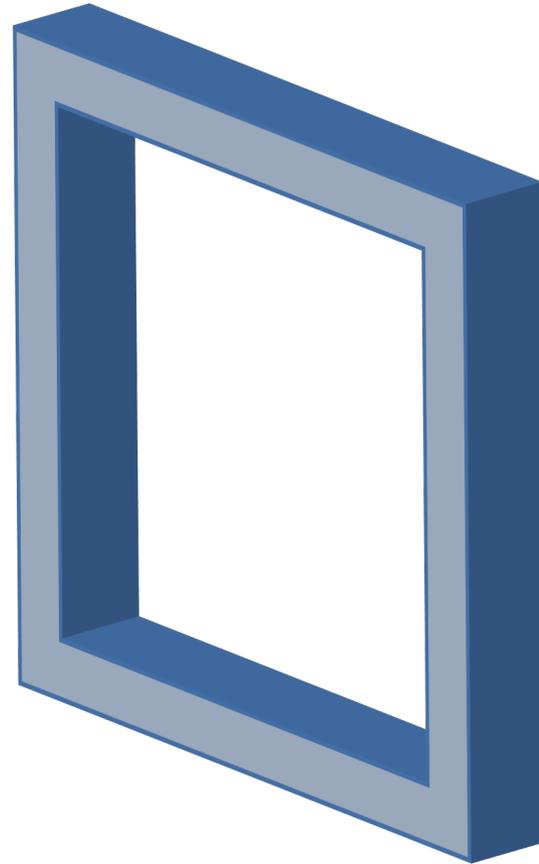
# UAS Integration into the NAS



# UAS



Authorization by FAA  
to operate in the NAS



Authorization by FAA  
to operate in a TFR

# Multiple sites request during Harvey

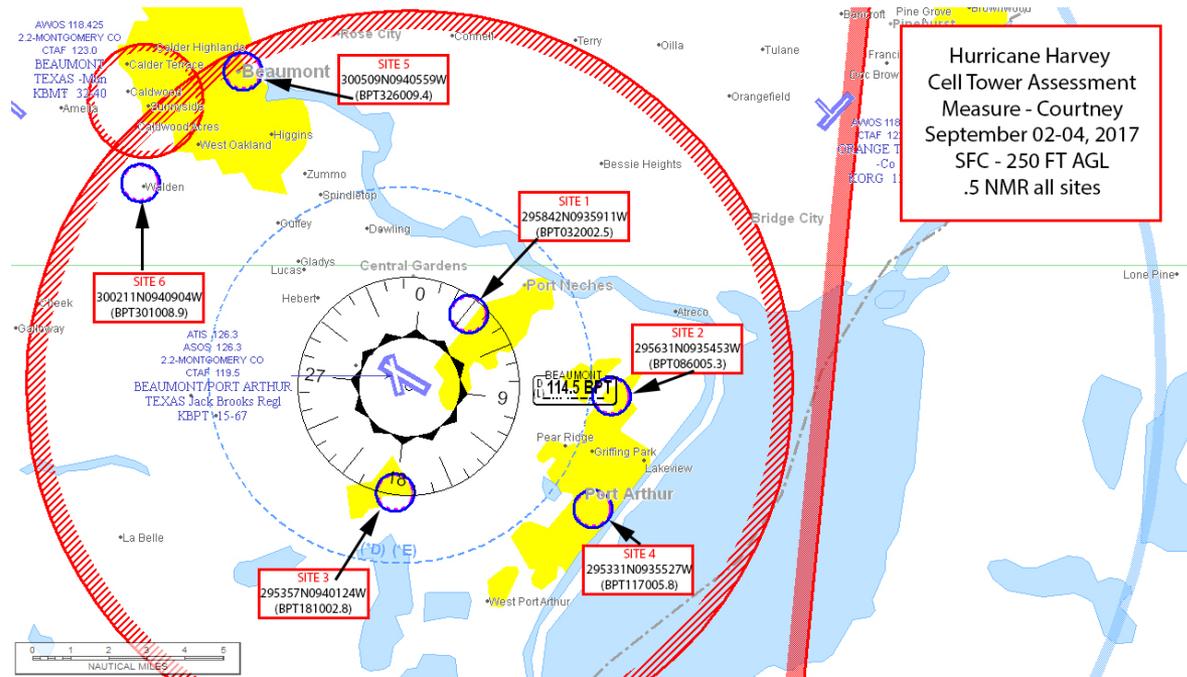
Altitude and radius around site: Surface to 250 FT AGL, .5 NMR of each site

Operations areas:

**SITE 1** - 295842N0935911W (BPT032002.5) **SITE 2** - 295631N0935453W (BPT086005.3)

**SITE 3** - 295357N0940124W (BPT181002.8) **SITE 4** - 295331N0935527W (BPT117005.8)

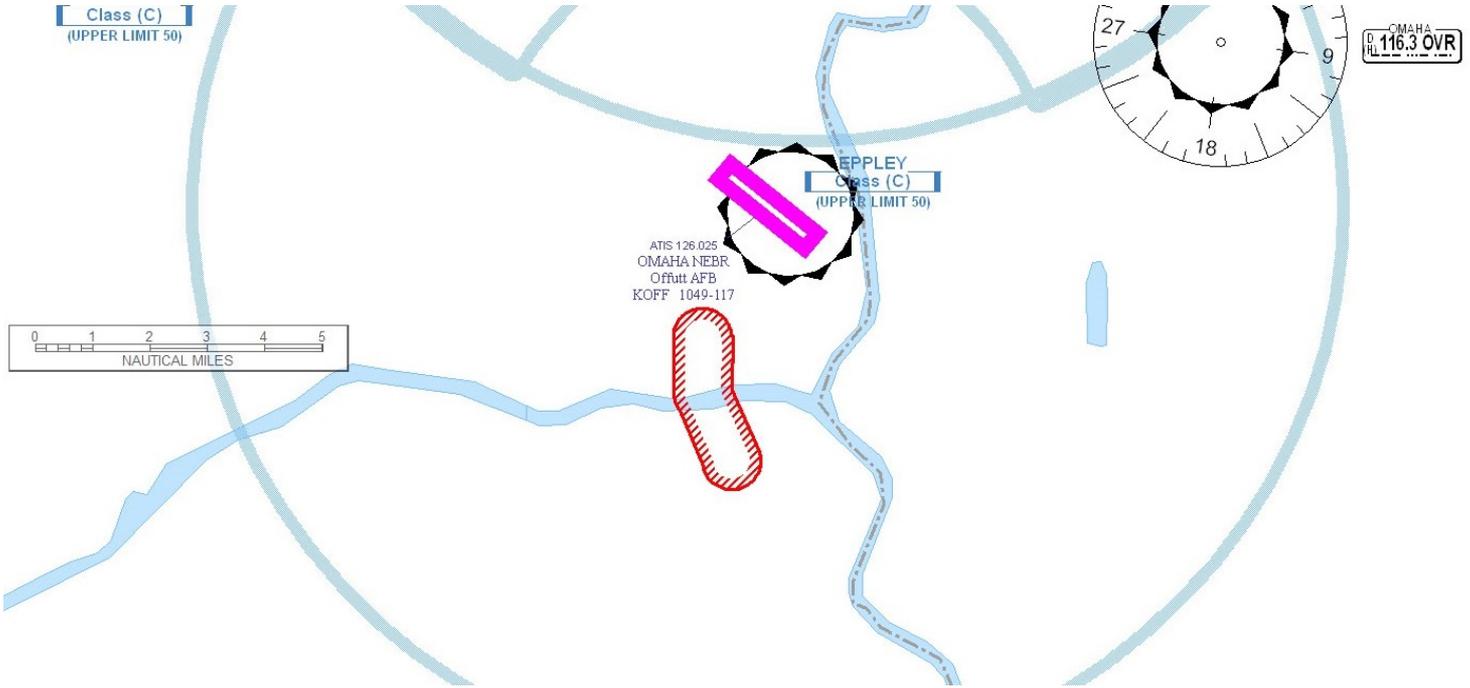
**SITE 5** - 300509N0940559W (BPT326009.4) **SITE 6** - 300211N0940904W (BPT301008.9)



# Omaha Nebraska Flooding March 2019



# BNSF SGI Omaha, NE



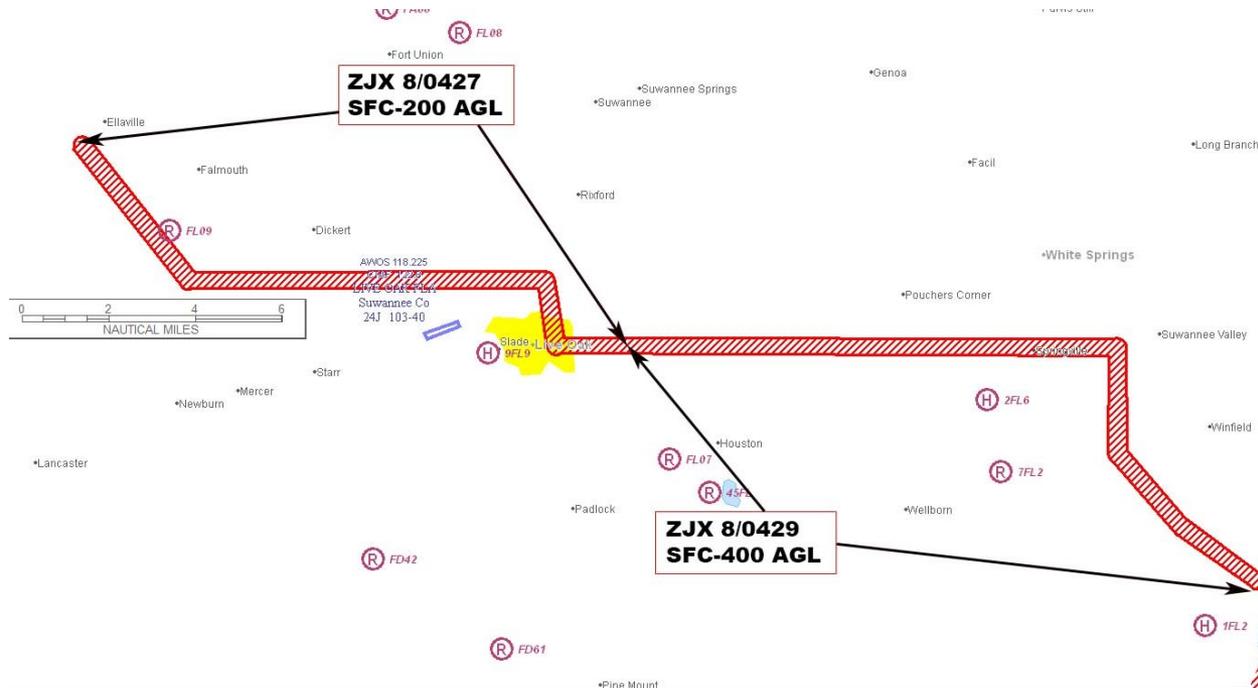
# Hurricane Michael

## Mexico Beach, FL Oct 2018



# FP&L SGI & BVLOS TFR

## Lake City, FL

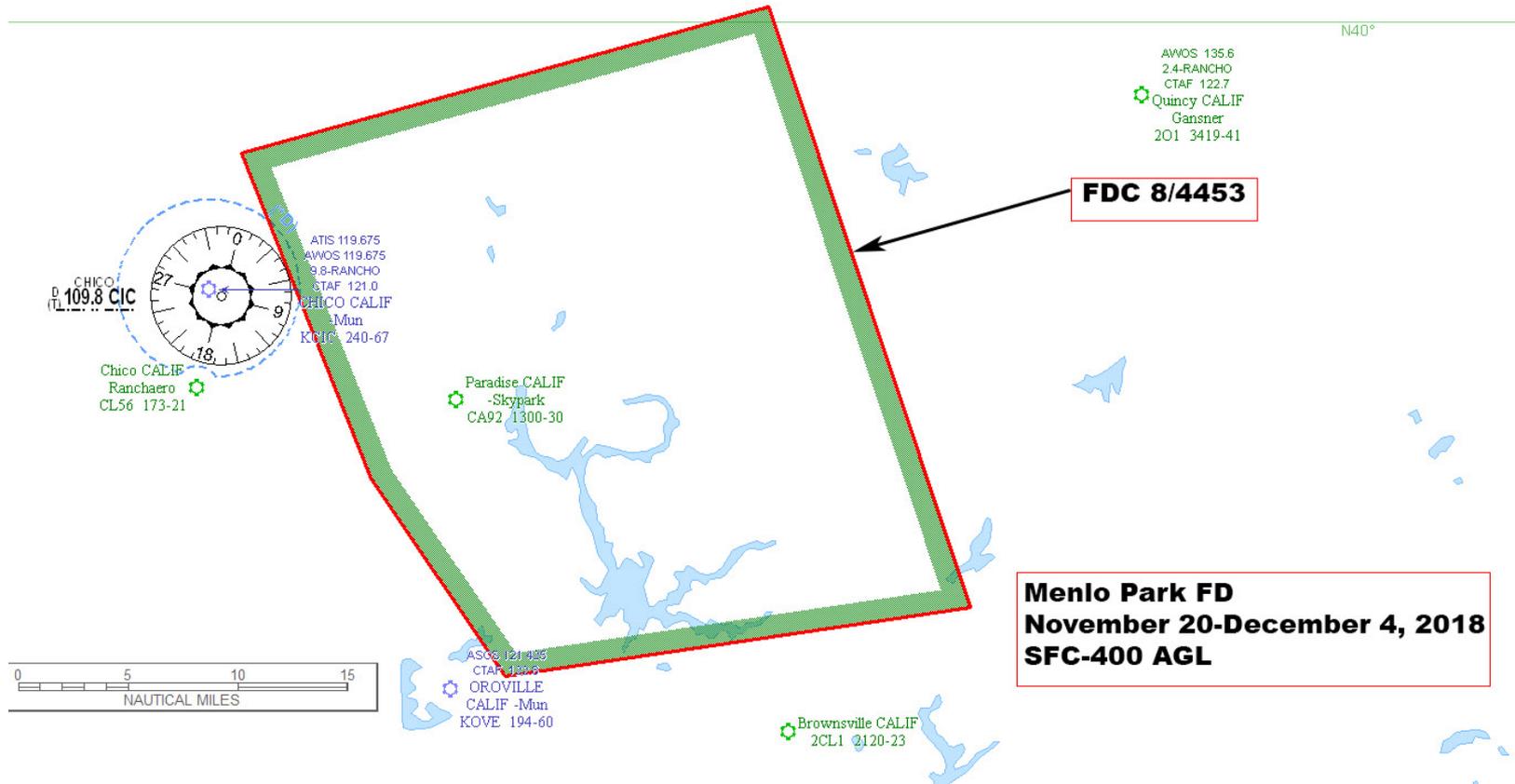


# Camp Fire - Paradise, CA

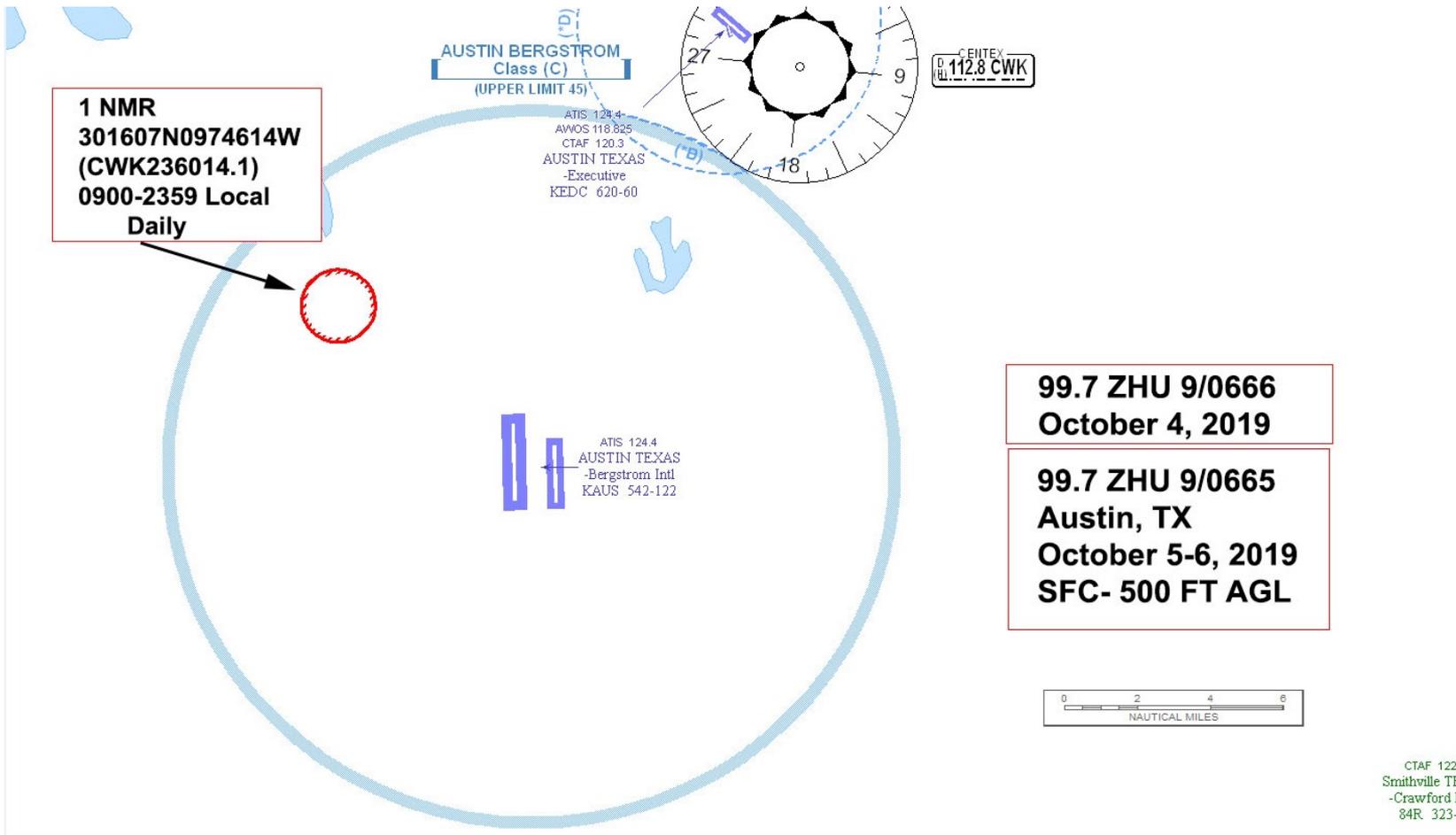
## November 2018



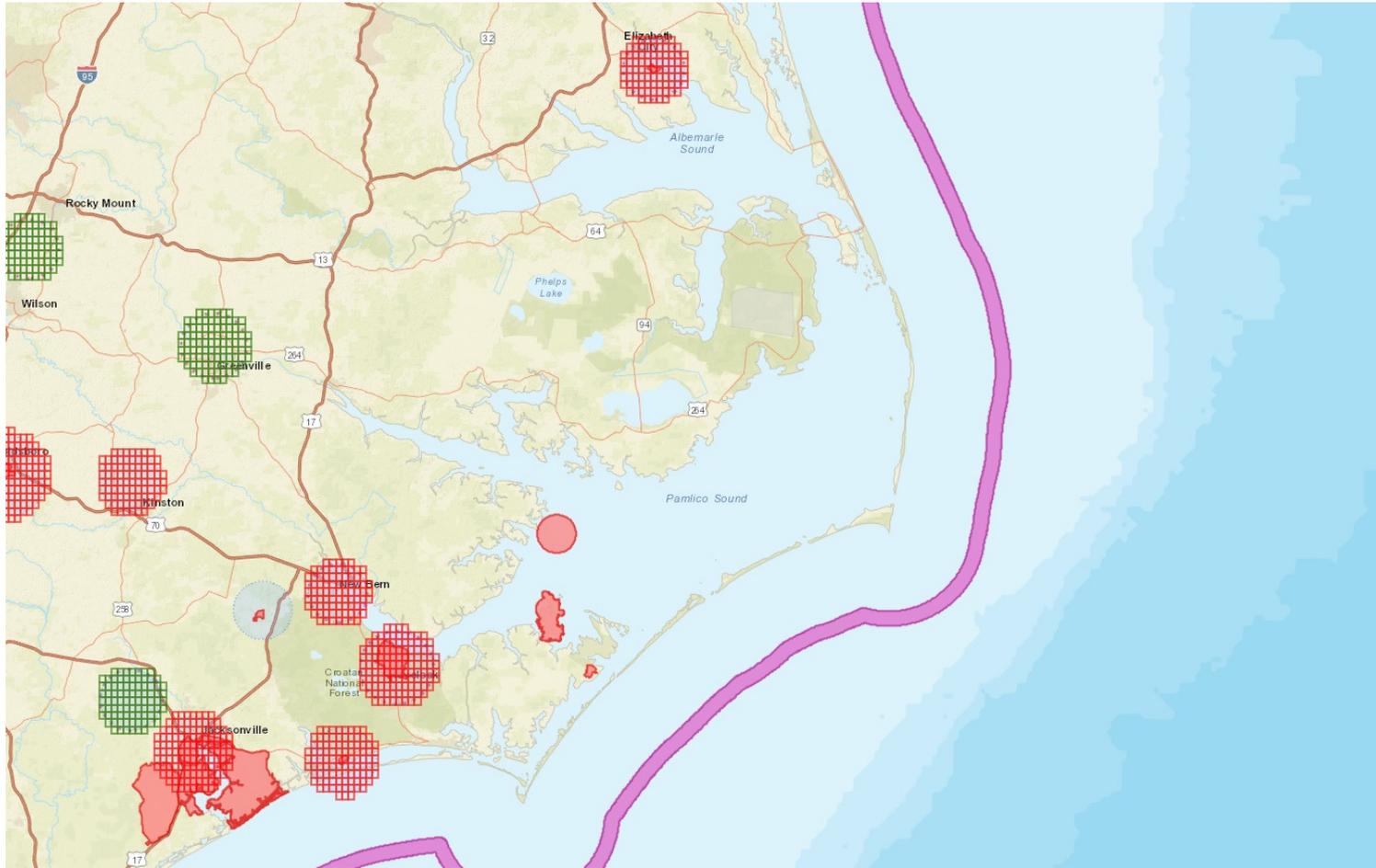
# DOI SGI to access TFR



# Counter UAS TFR



# Counter UAS Coastline Special Advisory



# System Operations Support Center Significant Government Interest – COA

## 2018

A total of 710 SGI COA's were issued for the year 2018. These were comprised of our day to day law enforcement requests and major events that included fires in the west and hurricanes in the east.

## 2019

As of August we have issued more than 950 SGI COA's, surpassing last year's total, and putting the SOSOC on pace to issue in excess of 1200 approvals for the year, roughly a 60% increase over 2018

# How to request a Special Governmental Interest (SGI) airspace authorization

- Possess either a UAS Certificate of Authorization (COA) or a Part 107 Certificate
- Must be a First Responder or have a statement of work
- Email a completed SGI form to the SOSC at [9-ator-hq-sosc@faa.gov](mailto:9-ator-hq-sosc@faa.gov) or call the SOSC at 202-267-8276 to request the form.
- When you call you must provide the following:
  1. An explanation of the situation
  2. The coordinates and dimensions requested ie. 335928N1181625W 1 NMR
  3. Agency's or Company's point of contact name and phone number



## FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION

### Basic Qualifications

- The requesting operator must possess a Certificate of Waiver or Authorization (COA) or Part 107 Pilot License
- The UAS operation must support an emergency response or other effort being conducted to address exigent circumstances and that will benefit the public good
- The requested FAA approval cannot be secured via normal processes in time to meet urgent operational needs



### Operator Information

#### Mandatory entry

Operator Organization (e.g., agency or company)

Operator Address

Operator Point-of Contact (including name, office + mobile phone number, and email)

Pilot and Observers (including names, mobile phone numbers, and emails)

Type of UAS

### Documentation

If the requested UAS operation will be flown under a pre-existing COA, please attach it hereto and provide the COA number below.

If the request UAS operation will be flow under Part 107, please provide the Part 107 Pilot License number below.



### Requested Flight Details

Enter the date(s) of the proposed UAS operation (e.g., 03/18/2018 or 03/18/2018-03/21/2018) **Mandatory entry**

Enter the times of the proposed UAS operation (be sure to confirm time zone; e.g., 1200L-1400L daily) **Mandatory entry**

Enter the location of the proposed flight (reference the nearest city or town, and state; e.g., Gulfport, MS)

Enter the distance and direction from the nearest airport, and FAA identification of the same (e.g., 6 NM W of GPT)

Identify the class(es) of airspace in which the flight will be conducted (e.g., Class G/E/D/C/B/A)

Requested altitude of UAS flight: **Mandatory entry**

Enter GIS details defining location of proposed flight (only one area type description needed) **Mandatory entry**

For those flights remaining within a general contiguous area, which can be described as a circular polygon, provide the latitude and longitude, expressed as **degrees/minutes/seconds**, of the center of that area and the radius of that same area (e.g., XX:XX:XXN / XXX:XX:XXW - .25NM radius)

For those flights remaining within a general contiguous area, which cannot be easily described as a circular polygon, provide the latitude and longitude, expressed as **degrees/minutes/seconds**, of the vertices of the general area starting with the most northerly point and then progressing clockwise (e.g., (XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW) - .25NM wide)

For those flights following an extended route, provide the latitude and longitude, expressed as **degrees/minutes/seconds**, of the key waypoints of the route, and, as appropriate provide the width of the route (e.g., XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW - .25NM wide)

### Nature and Description of Event



Enter the type of urgent UAS operation to be flown		Description of event
<input type="checkbox"/>	Firefighting Law Enforcement Search and Rescue	
<input type="checkbox"/>	Local / National / Natural Disaster	
<input type="checkbox"/>	Other (specify below)	

Additional Pilot Qualifications	
Enter additional pilot qualifications	
<input type="checkbox"/>	Sport/Recreational/Private pilot certificate
<input type="checkbox"/>	Commercial/Airline pilot certificate
<input type="checkbox"/>	Flight instructor certificate

**Contacting the SOSC**

The SOSC office and email are staffed/monitored 0600-2400 Eastern Time. For all emergencies, please follow up any email with a phone call to 202-267-8276, which is answered **24/7**.

[https://www.faa.gov/uas/advanced\\_operations/emergency\\_situations/](https://www.faa.gov/uas/advanced_operations/emergency_situations/)

Emergency Operation Request Form

Send to:

System Operations Support Center (SOSC) at:

[9-ator-hq-sosc@faa.gov](mailto:9-ator-hq-sosc@faa.gov)

For an immediate emergency, follow with a Phone call.

202-267-8276

Phone is answered 24/7. Office open 18/7.